AMENDMENTS TO THE CLAIMS

1. - 62. (Cancelled)

63. (Currently Amended) An intracellular recognition molecule R, ~~comprising~~ consisting of a proteinaceous recognition domain[[,]] conformationally constrained by covalent bonding at both its extremities to a platform, said recognition molecule R specifically interacting, within a cell, with a site on a predetermined intracellular target molecule T, the interaction with T occurring with an affinity corresponding to a K_d value comprised between 1×10^{-9} M and 1×10^{-14} M, wherein said intracellular recognition molecule R is a peptide aptamer, wherein said platform is thioredoxin (TRX) or a TRX-like protein and wherein the proteinaceous recognition domain consists of a peptide of five to sixty amino acids.

64. (Previously Presented) The intracellular recognition molecule R according to claim 63 wherein the recognition domain consists of a peptide of ten to forty amino acids.

65. (Previously Presented) The intracellular recognition molecule R according to claim 64 wherein the peptide recognition domain comprises a random peptide.

66. (Cancelled)

67. (Previously Presented) The intracellular recognition molecule R according to claim 64, wherein the platform is heterologous with respect to the recognition domain.

68. - 69. (Cancelled)

70. (Previously Presented) The intracellular recognition molecule according to claim 63,

wherein the intracellular target molecule T with which R specifically interacts is chosen from a cyclin-dependent kinase and a pro-apoptotic protein.

71. (Previously Presented) The intracellular recognition molecule according to claim 70 wherein the intracellular target molecule T is Cdk2.

72. (Currently Amended) The intracellular recognition molecule according to claim 71 wherein the peptide recognition domain ~~comprises~~ consists of a mutant of the amino acid sequence QVWSLWALGWRWLRRYGWNM (SEQ ID NO:1), said mutant having from one to three amino acid changes with respect to said sequence.

73. (Currently Amended) The intracellular recognition molecule according to claim 72 wherein the peptide recognition domain ~~comprises~~ consists of the amino acid sequence QVWSSWALGWRWLRRYGWGM (SEQ ID NO:2).

74. (Previously Presented) The intracellular recognition molecule according to claim 70 wherein the intracellular target molecule T is Bax.

75. (Currently Amended) The intracellular recognition molecule according to claim 74 wherein the peptide recognition domain ~~comprises~~ consists of a mutant of the amino acid sequence PRGAPMWMRWVCQMLETMFL (SEQ ID NO:3), said mutant having from one to three amino acid changes with respect to said sequence.

76. (Currently Amended) The intracellular recognition molecule according to claim 75 wherein the peptide recognition domain ~~comprises~~ consists of the amino acid sequence PRGAPMWLRCVCQMLETKFL(SEQ ID NO:4).

77. (Previously Presented) An oligomeric intracellular recognition molecule, comprising from two to four intracellular recognition molecules R, each being an intracellular recognition molecule according to claim 63, said recognition molecules being covalently linked to each other, either directly or via a linker.

78. (Previously Presented) The oligomeric intracellular recognition molecule according to claim 77 comprising two intracellular recognition molecules R.

79. - 83. (Cancelled)

84. (Previously Presented) The intracellular recognition molecule R according to claim 63 wherein the recognition domain consists of 20 amino acids.

85. – 92. (Cancelled)

93. (New) The intracellular recognition molecule R according to claim 63 wherein said cell is a eukaryotic cell.

94. (New) The intracellular recognition molecule R according to claim 93 wherein said eukaryotic cell is a mammalian cell.

95. (New) The intracellular recognition molecule R according to claim 93 wherein said eukaryotic cell is a yeast cell.

96. (New) The intracellular recognition molecule R according to claim 63 wherein said peptide of five to sixty amino acids comprises the sequence of SEQ ID NO:1, 2, 3, or 4, wherein said platform is thioredoxin, human thioredoxin, or glutaredoxin, and wherein

said cell is a eukaryotic cell.

97. (New) The intracellular recognition molecule R according to claim 96 wherein said eukaryotic cell is a mammalian cell.

98. (New) The intracellular recognition molecule R according to claim 96 wherein said eukaryotic cell is a yeast cell.

99. (New) The intracellular recognition molecule R according to claim 63 wherein said peptide of five to sixty amino acids comprises a mutant of the amino acid sequence of SEQ ID NO:1, 2, 3, or 4, said mutant consisting of one to three amino acid changes with respect to the sequence of SEQ ID NO:1, 2, 3, or 4, wherein said platform is thioredoxin, human thioredoxin, or glutaredoxin, and wherein said cell is a eukaryotic cell.

100. (New) The intracellular recognition molecule R according to claim 99 wherein said eukaryotic cell is a mammalian cell.

101. (New) The intracellular recognition molecule R according to claim 99 wherein said eukaryotic cell is a yeast cell.